Acoustical Physics 2017 vol.63 N1, pages 7-13

Generation of higher harmonics for resonance oscillations in an open-ended pipe

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Abstract

© 2017, Pleiades Publishing, Ltd.We present a theory of resonance oscillations at doubled and tripled frequencies in a pipe open at one end. The boundary condition at the open end is obtained with allowance for the subharmonicity of speed fluctuations at the open end; it does not contain empirical parameters. Quite good qualitative and quantitative coincidence of the theoretical and experiment results is achieved.

http://dx.doi.org/10.1134/S1063771016060178

Keywords

gas resonance oscillations, open pipe, pressure, second and third harmonics, speed

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